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IS 10228 (1982): school bag [PCD 13: Rubber and Rubber Products]



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**IS : 10228 - 1982**  
**(Reaffirmed 1998)**

*Indian Standard*

**SPECIFICATION FOR  
SCHOOL BAG**

( First Reprint SEPTEMBER 2000 )

UDC 688.35 : 371.89

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**BUREAU OF INDIAN STANDARDS**  
**MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG**  
**NEW DELHI 110002**

# AMENDMENT NO. 1   APRIL 2003 TO IS 10228 : 1982   SPECIFICATION FOR SCHOOL BAG

( Page 4, clause 4.1 ) — Substitute the following for the existing clause.

‘4.1 The various components of the school bag shall be made from the materials specified in Table 1 or from other types of materials, suitable for the intended purpose, subject to the agreement between the purchaser and the supplier.’

[ Page 5, Table 1, Sl No. (iv) and (v) ] — Substitute the following for the existing:

Sl No.	Components	Material	Conforming to
(1)	(2)	(3)	(4)
iv)	Sewing thread for body and straps	Sewing cotton thread, Variety No. 28 (165 dtex × 6) (6 cord, 3 strands, each 2 fold) or Sewing polyester thread Variety No. 9 (145 dtex × 6) or Any other suitable thread, as agreed to between purchaser and the manufacturer. Thread may be grey or any colour matching to the body colour	IS 1720:1978‡  IS 9543:1980§
V)	Sewing thread for piping	Sewing cotton thread, Variety No. 32 (74 dtex × 6) (6 cord, 3 strands, each 2 fold) or Sewing polyester thread Variety No. 5 (145 dtex × 3) or Any other suitable thread, as agreed to between purchaser and the manufacturer. Thread may be black or of same colour as that of piping	IS 1720:1978‡  IS 9543:1980§

( Page 5, Table 1, footnotes ) — Insert the following at the end:

‘§Specification for spun polyester sewing threads.’

# Indian Standard

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( *Continued on page 2* )

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# *Indian Standard*

## SPECIFICATION FOR SCHOOL BAG

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 29 June 1982, after the draft finalized by the Travel Requisites Sectional Committee had been approved by the Consumer Products and Medical Instruments Division Council.

**0.2** The school bag described in this standard is in three sizes 'Small' 'Medium' and 'Large', with two different designs in each size, for example, one with side strap and the other with back straps. The bag is provided with a patch pocket in front, piping all round the edges and buckles with straps for closure.

**0.3** The school bags shall be provided with back strap or side strap or both, as agreed to between the purchaser and the manufacturer. A handle may also be provided if required by the purchaser.

**0.4** This standard contains clauses which call for agreement between the purchaser and the manufacturer, which permit the purchaser to use his option for selection, to suit his requirements. The relevant clauses are **3.1, 4.1, 5.5, 6.1** and **9.1**.

**0.5** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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### 1. SCOPE

**1.1** This standard covers the requirements for bags, used by school students for carrying books, writing material, and drawing instruments.

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\*Rules for rounding off numerical values (*revised*).



## **2. NOMENCLATURE**

**2.1** The nomenclature of the bag shall be as shown in Fig. 1.

## **3. SHAPE AND DIMENSIONS**

**3.1** The shape and dimensions of the school bag shall be as shown in Fig. 1. It may also be made to other shapes and dimensions as agreed to between the purchaser and the manufacturer:

**3.1.1** The length of back strap for 'small', 'medium' and 'large' size shall preferably be 430 mm, 455 mm and 470 mm respectively.

**3.1.2** The length of side strap shall be adjustable by means of a buckle as shown in Fig. 1. The length shall be adjustable between 260 mm to 950 mm.

## **4. MATERIAL**

**4.1** The various components of the school bag shall be made from the materials specified in Table 1. The school bag may also be made from other types of materials, suitable for the intended purpose, subject to the agreement between the purchaser and the manufacturer.

## **5. MANUFACTURE, WORKMANSHIP AND FINISH**

**5.1** The school bag shall be made from three pieces of material, that is, front, back with top flap and gusset.

**5.2** The front portion shall be provided with a patch pocket for small articles for use in school as shown in Fig. 1. The bag may also be provided with two patch pockets in the front portion. The shape of the pocket or pockets should be such as to provide sufficient space for keeping lunch-box, pencil box, instrument box, etc. This may be done with or without gusset.

**5.3** The bag shall be provided with minimum 10 mm wide piping at the pocket, top edges and the sides as shown in Fig. 1. The piping shall be of the material specified in Table 1.

**5.4** The school bag shall be assembled 'lock stitch' or 'chain stitch' regulated to give 6 to 8 stitches per 25 mm. All ends shall be securely fastened, off and loose threads properly trimmed.

**5.5** Two buckles with straps shall be provided in the bag for closure as shown in Fig. 1. A handle may also be provided if required by the purchaser.

**5.6** The bag shall be neatly finished with straight and parallel rows of stitching, where required.

TABLE 1 MATERIAL FOR COMPONENTS OF SCHOOL BAG

( Clause 4.1 )

Sr. No.	COMPONENTS	MATERIAL	CONFORMING TO
(1)	(2)	(3)	(4)
i)	Body, straps, pockets, etc	Double-texture rubberized fabrics or Single texture rubberized waterproof fabrics or Any other suitable material, as agreed to between the purchaser and the manufacturer	IS : 6110-1971* IS : 5915-1970† —
ii)	Piping	Double-texture rubberized fabric or Any other suitable material, as agreed to between the purchaser and the manufacturer	IS : 6110-1971* —
iii)	Buckles	Aluminium prongless or of any other rustproof metal	—
iv)	Sewing thread for body and straps	Sewing cotton thread, Variety No. 13 ( 6 Ply × 10 Tex ) Grey or any colour matching to the body-colour	IS : 1720-1978‡
v)	Sewing thread for piping	Sewing cotton thread, Variety No. 13 ( 6 Ply × 10 Tex ) black or of same colour as that of piping	IS : 1720-1978‡

\*Specification for double-texture rubberized fabrics.

†Specification for single texture rubberized waterproof fabrics.

‡Specification for cotton sewing threads ( second revision ).

**5.7** The ends of buckle loops, side, back and buckle straps shall be properly tacked with the rows of stitches as shown in Fig. 1.

## 6. SAMPLING

**6.1** Unless otherwise agreed to between the purchaser and the supplier, the procedure given in IS : 2500 ( Part I )-1973\* shall be followed for sampling. The inspection level and sampling plan as given in **6.2** and **6.3** shall be followed.

\*Specification for sampling inspection tables: Part I Inspection by attributes and by count of defects ( first revision ).

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**6.2** The scale of sampling shall correspond to inspection level III given in Table 1 of IS : 2500 ( Part I )-1973\* for all the requirements specified in this standard.

**6.3** The sampling plan shall correspond to AQL plans of 4.0 percent given in Table 2 of IS : 2500 ( Part I )-1973\*.

## 7. TEST

**7.1 Drop Tests** — The school bag shall be fully loaded with books or any other suitable material, weighing 6 kg in case of 'small', 8 kg in case of 'medium' and 10 kg in case of 'large' size school bags. After filling the specified weight, the bags shall be closed, buckles fastened and hung on pegs at the wall, with the help of either the side strap or the back straps. The distance between the floor and the peg shall be 1.5 metre in case of side strap and 1.0 metre in case of back strap. The bags shall then be suddenly dropped and this operation shall be repeated 10 times. During or after the test the stitches shall not open, the straps and buckles shall not give way or come off the stitched tacks.

**7.2 Handle Snatch Test** — The school bag shall be securely fixed in an inverted position on a rigid support, leaving the strap free for applying the load. The strap shall be suitably harnessed to distribute the load applied over the entire middle portion. A load of 50 N ( 5 kgf ) shall be applied suddenly to the strap for a period of 30 seconds. This operation shall be repeated 10 times.

**7.2.1** The weight may be applied either by means of spring balance or weights, suitably placed on a stirrup. During or after the test, the strap shall not have snapped, loosened or come off the stitching.

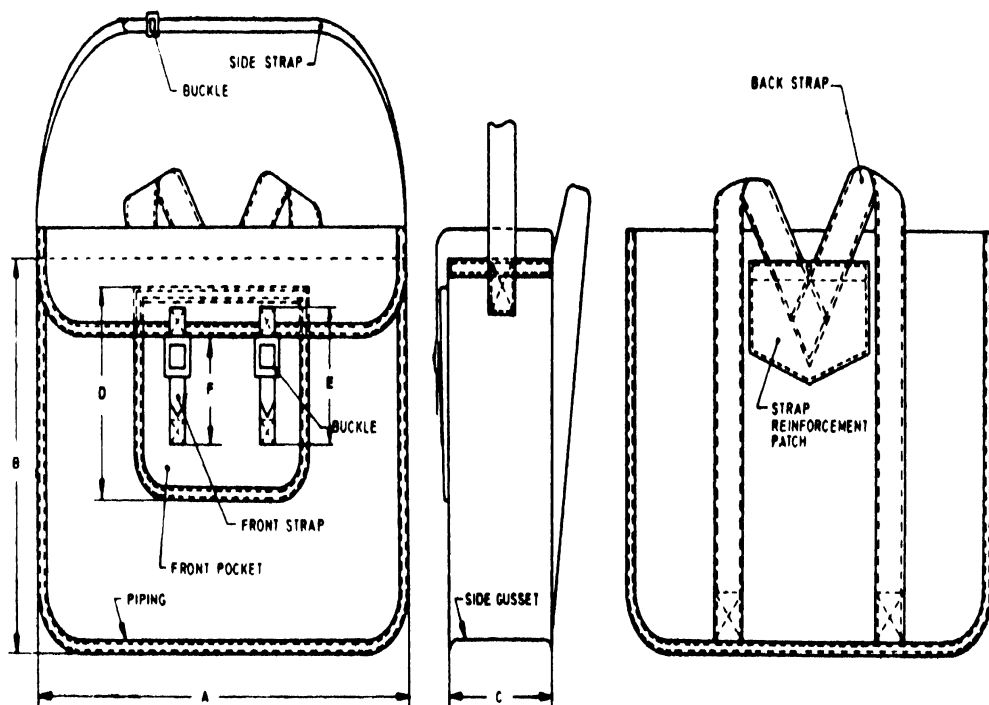
## 8. MARKING

**8.1** Each school bag shall be legibly marked with the following:

- a) Manufacturer's name or registered trade-mark,
- b) Size, and
- e) Year of manufacture in case of rubberized fabric.

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\*Specification for sampling inspection tables: Part I Inspection by attributes and by count of defects ( *first revision* ).



Size	A	B	C	D	E	F
Small	330	230	90	140	130	65
Medium	360	260	110	140	130	65
Large	380	280	140	140	180	65

All dimensions in millimetres.

FIG. 1 SCHOOL BAG

**8.2** The product may also be marked with Standard mark.

**8.2.1** The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

## **9. PACKING**

**9.1** Each school bag shall either be packed first in alkathene bag and then in any other suitably packing material to ensure safe transportation, or as agreed to between the purchaser and the supplier.

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